



Introduction to the **Student Project**

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Outline of the Project

- For the student project you will work in a team
 - ➔ Each discussion group will form a team
- Your task as a team will be:
 - ➔ Select a published experimental paper on a given physics subject
 - ➔ As a team, study and understand all aspects of the paper (trigger, selection, backgrounds, statistical analysis, systematic uncertainties, theoretical interpretation, ...)
 - ➔ Together, prepare a 15 minute presentation on the paper (+ 5 minutes for questions)
 - ➔ The presentation will be given by one member of the team



Further Guidelines

- Pick a suitable paper for a 15 min. presentation
 - ➔ Typically one looks for a paper of at least ~10 pages
 - ➔ Please let me know, once you have decided
 - ➔ We can also provide printed copies of the paper
- Work on the project as a team
 - ➔ You can use part of the discussion session to get organised
 - ➔ Most of the work should happen in your free time
 - ➔ Discuss and select the paper together, plan and share the work, review progress regularly, combine the contributions, select a speaker, organise a rehearsal of the talk...
 - ➔ It is a student project, you may ask the discussion leaders for guidance if needed, but the task is on you

Timeline

- Assign topics to groups now
- Groups select paper by Tuesday 15:30 latest
- Special session for the presentations on Sunday, March 26
 - ➔ Order of talks will be random
 - ➔ There will be a vote to determine the winning presentation (1 vote per group)

26 Mar 2023	
09:00	Higgs & Beyond 4 - Jonathan R. Ellis (King's College London) 0
10:30	--- Coffee Break ---
11:00	Neutrino Physics 2 - russia mikhailov (Universidade de São Paulo) 0
12:30	--- Lunch & Free time ---
13:30	Cosmology 1 - Prof. celina deane (University of Sydney) 0
17:00	--- Coffee Break ---
18:00	Discussion Sessions (until 19:00) 0
19:00	Dinner ...
20:00	Student Project Presentations (until 22:00) 0

Physics Topics

- 1) Searches at the LHC
- 2) Higgs measurements
- 3) QCD or Electroweak precision measurements
- 4) Flavour physics measurements
- 5) Heavy Ion measurements
- 6) Neutrino physics
- 7) UHE Cosmic Rays

We will pick 5 out of the 7 possible topics at random ₅

Assigning Subjects to Groups

Discussion Group A

Discussion Group B

Discussion Group C

Discussion Group D

Discussion Group E



Searches at the LHC

Higgs measurements

QCD or Electroweak precision
measurements

Flavour physics measurements

Heavy Ion measurements

Neutrino physics

UHE Cosmic Rays

Questions ?

Have fun with the projects !

Subjects assigned to Groups

Discussion Group A: QCD or Electroweak precision measurements

Discussion Group B: Higgs measurements

Discussion Group C: Neutrino physics

Discussion Group D: UHE Cosmic Rays

Discussion Group E: Searches at the LHC